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THE ZOOLOGIST:

A Monthly Journal

OF

NATURAL HISTORY,

FOR

RECORDING FACTS AND ANECDOTES

RELATING TO

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NOTICES OF NEW BOOKS.

'*Travels of a Naturalist in Japan and Manchuria.*' By ARTHUR ADAMS, F.L.S., Staff-Surgeon, R.N. Hurst & Blackett. 1870. 334 pp. Demy 8vo.

(FIRST NOTICE.)

PLEASANT it is, very pleasant indeed, to fancy oneself standing on the deck of a good ship as she dances joyously over the waters of the "deep and dark blue ocean"—"borne like its bubbles onwards." Pleasant it is, there to enjoy the companionship of one we have met in days of yore, in that literary career in which there is no turning back: once set in successfully, it is a tide that knows no ebb, but flows on and on, until the hand is weary with the labour and the eye is dim with age: how truly has the wisest of men declared, "of making many books there is no end." Many who were once familiar with Mr. Adams as a contributor to the 'Zoologist' may possibly have feared that his "right hand had forgot her cunning," and could hold the pen no more: I well knew how groundless was this fear; I well knew that the spirit of the voyager had undergone no change, and that his powers of description were as great as when he first delighted us with his life-like sketches of Nature's handiwork. Let us accompany him on board the "Actæon," sail where he sails, land where he lands, admire what he admires, and lend a willing ear to all he has to say. He knows what to observe and how to observe. "When traversing the great oceans, besides keeping the towing-net always going whenever the ship is not sailing too fast, and whenever the weather is favourable, he always notes down on a track-chart every species of bird, fish, or mollusk he happens to see. If all naturalists did the same on their voyages, our knowledge of the geographical distribution of marine life would be greatly extended and improved."

He sails from the Land's End, glances, and nothing more, at Funchall, and anchors in the harbour of Rio, the most magnificent in the world, but sadly misnamed, for it is a land-locked bay, of unparalleled beauty indeed, but not the mouth of a river; hence to the Cape of Good Hope, where he abandons himself to his besetting sin, a weakness for beetles; sails to the Straits of Sunda, that "Gate of the East" which opens between Sumatra and Java; shoots pigs in Thwart-the-way island; and at Krakatua Island he watches the

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screaming cockatoos as they fly in circles high up in the blue empyrean; away to the north, he lands on Pratas Shoal, in the Chinese Sea, and anchors at Canton; visits Shang-tung and Pei-ho; ascends the great wall of China; "does" the Korea, so seldom "done" by Europeans since Hamel was there in 1653; passes through the Korean Strait; up, up, to the polynymic Island of Saghalen, where he scrapes acquaintance with the Ainos, "the Aborigines of the island;" is driven by a tempest through La Perouse Strait into the Sea of Okhotsk; botanises at Hakodadi; doats on beautiful Tsu-Sima; shoots Diant's pheasant on Sadi, or rather relates how Lieutenant Warren shot them, while he, the doctor, was "mooning about as usual" after beetles; joins the squid-fishers at Nisi-Bama; compares the cemetery at Nagasaki with that at Kensal Green, greatly to the advantage of the former; and finally fraternises with the Japanese; his Ultima Thule seeming to be Saghaleen. This is something like a trip; I commend it especially to the notice of Mr. Cook when he has exhausted Palestine and the Nile.

Such a traveller as Mr. Adams finds objects of interest everywhere: when on the sea nothing escapes his notice, not even the everlasting flying-fish (that snare of the book-maker and bugbear of the reader): he makes amusing capital even out of so stale and trite a subject, and observes, "When, as not unfrequently happens, the poor creature flies on board exhausted, it is picked up from the deck, and the 'clever one' who secures the prize, holds it in his hand and delivers a profound discourse on its habits and peculiarities to the listening crew." This is perhaps the first, as it may be the last time, this "exhausted" phenomenon has been made a subject for pleasantry. But let us land and accompany our author on one of his beetling excursions in St. Simon's Bay, at the Cape. It is refreshing to one, who, like myself, has outlived the ardour of collecting to observe the zeal with which Mr. Adams still enters on the pursuit, even while indulging a good-humoured smile at the enthusiasm of poor old Turner,—"now" alas "no more,"—and at that prince of all beetle-hunters, my friend Dr. Power, who is still amongst us, inspiring the young by his example, and comforting the old by unchanging kindliness. Here is a glimpse of Turner: "This reminded me of another great hunt for an emerald beetle, Drypta emarginata, with old Turner, a poor, but far-famed and eccentric collector of insects, now no more, in Hampshire, at pretty Alverstoke. In vain we toiled and tore up the grassy bank, the old man growling and swearing in a deep undertone at Anchomenus prasinus, another green but common beetle, which was always running about and giving him false hopes. At length he found a veritable Drypta. Drawing a long breath, he exclaimed, this time aloud, and with a jubilant expression, 'Glory! glory! glory! I got 'un!'" His incidental mention of Dr. Power is in this wise. "Some 'innocent' not yet versed in the deep mysteries of beetle-lore, and not inured to the toils of beetle-hunting, who may never have seen, as I have, the indefatigable Doctor Power on his stomach in a ditch, spectacles on nose, and the perspiration streaming down his cheeks with his fossorial exertions, may imagine that because I have some thousand beetles nicely carded in my store-box, I have had no trouble but to pick them up. I can tell that complacent know-nothing that he is quite mistaken." But adieu to England and English beetle-hunting; we have crossed the boisterous Atlantic from Rio and have landed at the Cape of Good Hope.

"Ground beetles were our game. Our fair readers must picture us, covered with sand, toiling among the loose stones at the base of the mountain, turning them over to see what there was beneath. We took some very fine prizes, named Anthiæ, some of which were large and black, some small and white-spotted.

"Here also we discovered a goodly store of sand-beetles and burrowing shore-beetles. In the gulleys, in the kloffs and small ravines, in the humid neighbourhood of streams and water-courses, mud-burrowing and marsh-beetles, together with a lily-beetle and a few snout-beetles, turned up and rewarded our patient assiduity. The Kaffir herdsman regarded us on this sultry day with special wonder, for while, crouched motionless under the shadiest bush he could find he watched his browsing buffaloes, lo! we were toiling and moiling in the sun, and after all our exertions finding nothing which he appeared to regard as food; hence his amazement. On our way back we captured a few stragglers, among them some elongated bark-beetles under the bark of a hollow tree near a pretty cottage on the hill-side, where we gathered delicious mushrooms. A fine diving beetle was taken in a cattle-pond; a mimic flower beetle and a shard-beetle were captured promenading a sheep-walk. By the sides of a sandy road much used by buffaloes we came upon a large sable sacred-beetle busily employed, like Sisyphus, in rolling up-hill earthen balls containing his little ones, which, as often as not, when pushed along with his crooked legs nearly to the top of the bank, came rolling down again. On the third day we proceeded to Millar's Point along the coast, and the special object of our mission was (start not, gentle reader) carrion beetles! We pursued an uneven course up sand-hills and down sand-dales until we espied a huge boulder rock covered with the trailing stems and fleshy leaves of the yellow Mesembryanthemum, or fig-marigold. The green carpet was torn off from the surface of the stone, when out ran the rove-beetles, large-eyed, burrowing and broad-bodied. At the same time the little pale scorpions dropped down, while the nimble yellow centipedes vanished mysteriously, with that unpleasant wriggling movement peculiar to hundred-legs and snakes.

"About two miles to the left of Simon's Town we crossed a plain where the grass struggled for existence with the sand, and where the round green gourds of the colocynth rested upon the ground like shot strewing the surface of a battle-field. A thousand foot-prints of horses stamped in the moist sand (for the ground is used for breaking-in horses) heightened the resemblance. On a sudden a taint in the pure air offended our nostrils, but we knew what it meant, and, like the vulture to his carrion meal, we were led by the nose to the carcase of a sheep; Placing our nobility to windward we capsized the defunct mutton, and those useful scavengers of nature, the burying beetles and the carrion beetles rewarded our bold adventure."—P. 34.

In the same favoured and favourite locality, or very near it, we pause to learn something of the fish, but even the fish seem to have been as attractive to beetles as beetles were to our author: he does not indeed mention the species, but it must have been one of the genus Brachinus.

"On our return we descended the sand-hills near the sea, and by the 'ancient and fish-like smell' we became aware of the vicinity of a station for cleaning and drying fish. Here were fish galore. Fish salted in great tubs; fish lying in heaps upon the ground; fish by cart-loads; fish by boat-loads; fish split open on long tables; fish covering all the rocks outside; fish by thousands drying on poles;—stacks of fish! We raised a casual board, and behold! the ground was alive with bombardier beetles, and there was an irregular salvo as in alarm they discharged their mimic guns! The long stretch of flat sandy shore between Simon's Town and Fish-hook Bay was a favourite walk of mine, fresh, breezy and full of interest. The weather had been very stormy of late, and as I strolled leisurely along 'the beeched margent of the sea' I stumbled across a stranded fiddle-fish with a head like a ray and a tail like a shark. The shore was strewn with many other remnants of fish, crab and cuttle, to which various fatal casualties had occurred. Among these we observed an entire flotilla of Ianthinas, or violet sea-snails, which had suffered shipwreck despite the buoyant floats with which each tiny vessel has been provided by Nature. Now, however, the scene was very peaceful. Out at sea only two little boats were visible, fishing for snook (a kind of long-nosed mackerel), between Noah's Ark and the Roman Rocks. The long rolling breakers came tumbling in with a deep and hollow roar, and on the huge bare rocks along one portion of the shore sat the cormorants drying their dusky wings, or sitting upright, motionless, like learned doctors met in solemn conclave. Near them were foolish penguins, gorged with fish, dozing in the fitful sun gleams. Three skulls of the 'right whale' were bleaching on the sand, and the eye of the great sea-eagle watched us from above."—P. 38.

I would here bid adieu to the Cape, but there is another little bit of Natural History, so prettily told and affording so pleasant a contrast to unclean carrion beetles and odoriferous fish, that I cannot forbear making the extract.

"During our brief sojourn at the Cape I was greatly interested in the way in which Nature provides for the dissemination of the seeds of the splendid silver-tree, the Leucodendron argenteum of botanists. The lance-like leaves, the stem, the branches, and even the fruit-cones, are covered with a silky down which glistens in the sun with a silvery sheen, and the mode by which the fruit is dispersed is, as I have said, very curious. The large oval, silvery cone is covered with scales, which being recurved by the heat, the ripe fruit or seed is suddenly cast forth with a little click. It does not fall at once however to the ground, but is borne up by a beautiful contrivance. The fruit is enclosed in a thin amber-coloured capsule or case, surmounted by a crown composed of four feathery shafts, which radiate upwards, but are united at their bases to form a sheath for the pistil. When the ripe fruit is ejected from the cone it bursts the membranous envelope which holds it, and when released falls about an inch and remains suspended by the stigma, which forms a sort of knot, thus at the same time balancing the tiny parachute, and by its mode of suspension forming a beautiful provision to take off the weight of the parachute when the seed strikes the ground."—P. 40.

The next place of interest is Anger, in the mainland of Java: here the Javanese were offering for sale their multifarious wares; in one place a hideous baboon sat munching a banana and watching with mischievously twinkling eyes every movement of those around. Lots of minor monkeys were grinning, chattering, and either quarrelling among themselves or stealing everything within their reach; lories and love-birds; squirrels and Java sparrows; water-tortoises and pythons; civet cats and chevrotins; intermixed with yams and cocoanuts, pine-apples, bananas and shaddocks. Here the epicure might provide himself with the finest fruits, here the naturalist might select the choicest animals. Our traveller, leaving this mercantile station, ventured a little way into the neighbouring jungle to satisfy his curiosity and to collect beetles: the thermometer stood at 90° in the shade, and oppressed by heat and thirst he stooped to drink at a trickling rivulet, when he saw under his very nose an object that made him start, the fresh imprint of a tiger paw so large that his outspread hand could only just cover it. He afterwards learned that two of the neighbouring villages had just been depopulated by these formidable animals. Mr. Adams took pains in the course of the wandering to obtain some statistics as to the northern range of the tiger. Atkinson says it has been killed in Siberia, having crossed the Kirghis Steppe into the Altai mountains; and Mr. Adams found them tolerably abundant, and the skins very cheap, at Lias-ho, in the province of Liau-tung in Manchuria. In this temperate climate the skin of the tiger is warmer and more woolly than in the hotter climate of India: they are obtained in this way: the Manchu Tartar digs a wide deep ditch of a circular form, leaving a little island, as it were, in the middle, in which he stations himself as a bait. The ditch is then covered over artfully with brushwood, and the tiger, perceiving the man, makes a spring, and falling short is impaled on spears placed ready to receive him, or shot by the hunter. I cannot say that I much envy either the tiger under such unpleasant surroundings or the hunter who serves as live bait.

In different places two of that singular animal the pangolin came under the notice of the traveller, and as I suppose few of my readers have enjoyed an opportunity of seeing the living animal I think the doctor's portraiture drawn from the life can scarcely be unacceptable: so here it is.

"Two living specimens of the scaly ant-eater (*Manis javanica*), having come under my notice, some account of its habits, as far as I was enabled to make them out, may be acceptable. The first was a female, and rejoicing in the soubriquet of 'Scales.' She was crepuscular, and remained coiled up in a ball during the day, secure in her scaly panoply. At the approach of night, however, she grew lively. A creature whose habits require to be studied by the aid of a dark lantern, must needs be interesting even to the most incurious observer; and a lizard-like mammal, whose every movement and attitude is probably a living illustration of those great extinct quadrupeds which once peopled the earth before man was created, must surely have the power of arresting the attention, if not of stimulating the imagination, of all who desire to penetrate the secrets of Nature. I doubt not Professor Owen would have lain prone on his stomach all the livelong night to watch the evolutions of this gnome-like mountaineer, in whose aspect, as she prowled about at night, there was something old-world and weird-like. The Scotch would say she had an 'uncanny' look; and truly, if but ten times bigger, she would unmistakably have reminded one of the times before the deluge. When she walked, she trod gingerly on the bent-under claws of her fore feet, and more firmly on the palms of her hind feet. A very favourite attitude with her was that assumed by her gigantic extinct analogue, the Mylodon, as seen in the wondrous model of Waterhouse Hawkins in the gardens of the Crystal Palace. The fore feet in my 'Madam Scales' were raised: and the animal was supported by the strong hind limbs, and the firm, flattened, powerful, muscular tail, the head and body being at the same time moved from side to side, and the little round prominent eyes peering cautiously about in every direction. In walking the fourth toe of the hind foot was also extended. The Chinese, in their sly manner, said that she pretended to be very quiet, but 'spose no man lookee,' she run very fast. She was certainly of an exceedingly timid and retiring disposition, tucking in her head between her fore-legs on the least alarm. So apathetic a quadruped appeared our 'Pangolin' (for so was she called by the Malays) that, coiled up in a strong net, I considered her properly secured, and carefully deposited her in my cabin. No sooner, however, had the last gleam of light vanished from my little 'scuttle,' than she knew the period of her lethargy had expired, and, bursting the trammels of her hempen toil, she roamed abroad. The first intimation I had of her escape was the ominous bark of Master 'Wouff,' a clever little terrier on board. The dog, puzzled by the queer scaly rat he had suddenly encountered, regarded with impotent rage the lizard-like intruder, while 'Scales,' secure in her coat of mail, bid defiance to the attacks of her canine assailant. The scaly ant-eater is called by the Chinese of Quang-tung 'Chun-shau-câp,' which literally means 'Scaly hill-borer.' They also name it 'Ling-li,' or 'Hill-carp.' It seems to be regarded by them as truly 'a fish out of water,' though it lives in the sides of the great mountains. They say it lays a trap for insects by erecting its scales, which suddenly closing on the entrance of flies, ants, &c., these intruders are secured, and when dead, fall out and are eaten. It is also said to feed upon fish, but both these stories appear to be myths, something similar to those told of our own familiar 'hedge-pig' sucking the teats of cows, and impaling apples on her quills in the orchards. The Manis javanica is sold in the markets of Canton, and is often carried about the streets as a curiosity. The scales are employed by the Chinese for medicinal purposes; but the flesh does not appear to be eaten, though it is very excellent food when roasted, as I can testify from personal experience, having had a portion of the defunct 'Scales' cooked. The Manis climbs very well, and can suspend itself head downwards by means of its strong flat tail. We fed our 'Scaly hill-borers' on raw eggs and chopped raw beef, on which they seemed to thrive. The unfortunate 'Scales' fell a victim to female curiosity. Exploring the hold of the ship in one of her midnight rambles, she was lost for a time, and though she at length found her way back to her box, she was so exhausted by long abstinence that she died of starvation."—P. 79.

One of the most interesting, though at the same time most heartrending, discoveries made by Mr. Adams in China was that the chrysalids of a Bombyx were collected to fatten ducks! think of this O shades of Tseu-kwang-k'he and Hawae-nan-tsze! Think of this ye merchant entomologists who have acquired "the potentiality of accumulating wealth beyond the utmost dreams of man's ambition," by "introducing" the Joree, the Deo-mooga, the Tusseh, the Bughy, the Kolisurra, the Munga, the Moonga, the Konkuri Mooga, and other silk-worms, and by "acclimatizing" the Addakoory, the Champa, the Soorn, the Kontooloa, the Digluttee, the Pattee Shoonda, the Sonhalloo, and the hundred other trees which support these inestimable treasures; think I say of a wretched Chinaman prowling about with a little sickle at the end of a long bamboo for the purpose of collecting the chrysalids of the Konkuri Mooga from the boughs of a Pattee Shoonda for the ignoble purpose of fattening ducks! and then imagine the same Chinaman "adding insult to injury" by imitating a duck in the act of gobbling the priceless pupæ. But the subject is too painful, and I forbear. Mr. Adams himself, after announcing the astounding fact, thinks it wise to tone down his communication by retiring gracefully amongst the flowers of Anthyllis, Veronica and Stellaria. Here is a portrait of the pupa-gatherer.

"Turning my eye in one direction, I perceived an individual with basket on arm, surveying the willows with inquiring eye. I was curious to know on what he was intent, and observed his motions. By means of a little sickle at the end of a long bamboo, he ever and anon detached brown swinging cradles from the slender boughs, and deposited them in his basket. I learned from himself that he was a pupa-gatherer, and that those mummy-like objects of his solicitude were the pupa-cases of a species of moth. When I humbly desired to know the use to which these accumulated grubs were to be put, the face of the old man relaxed into a smile, and he did his best to assume the appearance of a duck gobbling up imaginary fat grubs with impatient greediness and noise. From this pantomime I gathered that he was collecting food for his ducks; for this is one of the several ways they have of fattening ducks in China. In the beginning of summer, when the Principia utilis, which in winter time is nothing but a tangled mass of green thorns, teems with milk-white flowers, and swarms with bees; when the edges of the narrow paths are gay with the white and pink coronals of Anthyllis, about which wasps are flying, vigilant and bustling; when in all waste places the blue flowers of Veronica mingle with the milk-white stars of Stellaria, and in the far distance a puce-coloured mass of peach blossoms contrasts with the green willows; when those long-beaked hairy flies, the Bombylii, hover over the hot narrow paths, like so many lilliputian humming birds, and yellow-legged bees settle on the sun-bright spots,—then you are startled in your walks by strange guttural noises which seem to come from beneath your feet, but which in reality proceed from the iris leaves that margin the river's brink. There, moored in some secluded shallow spot, is seen a long-roofed boat, shaped like Noah's Ark, with a sloping board leading into the reeds and sedges. A little boy watches all day long his greedy charges, keeping them in order by means of a slender wand, with a bit of rag at the end. At daybreak down swarm the ducks into the frog-peopled swamp, and at sunset they are driven back, and waddle up the ladder by which they gain access to their roosting place."—P. 86.

The Chinaman is fond of fat ducks, and ducks are fond of fat frogs, and for the same reason—both frogs and ducks are wholesome esculents. Towards evening the frogs are in full activity and full song; they leap down the banks of the dykes by thousands, and plunging in the water commence their serenade; the men and boys attracted by the music, or rather *apprised* by the music of their whereabouts, prepare the bamboo, the string, the crooked pin, and the worm, and angle as it would seem very successfully for the musical Batrachia. Mr. Adams tells us he often fell in with an old man bending under the weight of a hamper of frogs, the produce of his evening's fishing. In like manner do the pig-tailed inhabitants of the "Flowery Land" disport themselves in the mud in search of the fresh-water crab with the woollen hand (*Eriocheir japonicus*): these are a much approved dainty with the Chinese, and are tied on a string and exposed for sale in the market-place in every town. As we become better acquainted with the "Celestial" inhabitants of the "Flowery Land," as proximity removes that impression of vague grandeur which distance always imparts, we begin to perceive that the Chinaman is very human, although we may still continue to admire his skill in horticulture, his wonderful organ of constructiveness, and his indomitable persistency. The chrysalids have led me to the ducks, the ducks to the frogs, and the frogs to the Chinaman; and thus I have been induced to improve the occasion by endeavouring to reconcile my fellow countrymen to their position in a land that is not "flowery," and conditions that cannot be called "celestial." Let me now glance at the mina-bird, an indweller of the east, well known to us by name.

"As for the mina-bird, he is everywhere: as you pass through the settlement, a loud cheery note salutes your ear, and on looking about to thank the feathered vocalist, you see, perched upon the cornice of the tallest house, a mina, solitary, but apparently on good terms with himself, piping at intervals in the fullness of his joy. While the old women are sitting in groups before their doors, busy with their spinning and their cotton-pods, the mina-birds dispute the crumbs with the ducks and the fowls. Among the buffaloes in the marsh by the river's brink, familiar and noisy, they gather in little flocks, perching on the heads and backs of their flat-horned, mud-covered companions, or refresh themselves by making short excursions to the adjacent homesteads. From the bamboo and fir-tree plantations, which make the temples so picturesque, issue forth their clear, sweet notes, mingled with the impudent 'quirk, quirk' of the magpie, the harsh screech of the longtailed butcher-bird, the noisy chatter of the blue jay, and the familiar chirp of the homely sparrow."—P. 93.

Here follows a pretty picture of Haileu, the "Alceste Island" of voyagers: the painter might perhaps have been excused had he omitted the "blue rock-pigeon perched on a slender graceful spray waving in the wind;" not because of the danger to the pigeon, but because such an acrobatic deviation from his ordinary staid proceedings ought not to be recorded against a bird pre-eminently fond of the safe footing which solid rock affords.

"On the rocks above water which form a portion of the reef that extends about a mile round the island, lie huddled together numbers of seals, which, on our approach in the boat, all tumble off into the water. The fishing cormorant evidently thinks these rocks an eligible station, and from them the captain, as he pulled ashore in his galley, shot a beautiful white spoonbill with a lemon-coloured crest. Geese, ducks and gulls are congregated together here in goodly numbers. The blue rock-pigeon appears to have regularly taken possession of, and to have colonized, 'Haileu,' which is the proper Chinese name of the island. The number and variety of other birds which make it their dwelling-place is remarkable: swallows build in the caves which are hollowed out in parts of the huge trachyte cliffs, and here and there, on a giant pinnacle, is found a secure eyrie for the eagle and the kite. In the chasms of the deep precipices, where the sun glints on vast surfaces of shining silvery micaceous schist, on narrow ledges of white gleaming trachyte, and on the black, frowning, weather-stained, lichen-spotted masses which overhang the little bays, are seen blue rock-pigeons walking about, cooing, bowing to each other, and daintily preening their feathers. One is quietly perched on a slender graceful spray, which waves in the wind from one of the fissures half-way down a perpendicular wall of rock many hundred feet in descent; while others near the top seem to be paying each other polite attentions on green carpets fragrant with the scent of wild blossoming thyme. Hundreds fly out from the side of the cliff on the report of a gun, and after a short excursion return again to the security of their rocky homes. A brown owl maintains her 'ancient solitary reign' in the secret recesses. Numbers of pretty hoopoes are flitting about in their peculiar jaunty manner, raising and depressing their crests, and archly coquetting with one another. Large kites and hawks, of which I have observed two species, sail, poised on outspread wings, high above the island; linnets utter their short pleasing notes as they rise in clouds; and a quail is shot in the high grass at the summit."—P. 99.

The 'Zoologist' used to be celebrated for its advocacy of the sea-serpent, and elicited a vast amount of learned reasoning to show that such things could not be. Mr. Adams adds his contribution on the same side, and shows us that he was actually on the point of shooting with a revolver the root of a tree "gnarled and twisted and secured to the moorings of a fishing-net." Thus did Mr. Rigby frequently prove political events had not occurred; and thus even while I am writing does a sagacious politician establish in the most satisfactory manner that the *Secret Treaty* was a hoax because not written in that English-school-girl French to which he was accustomed; and thus in a vein of exquisite satire did Archbishop Whateley raise historic doubts of the existence of the first Napoleon; but if we have no saurians in the ocean we have certainly fishes which may reasonably be mistaken for them, as we shall see.

"Any particulars concerning ophioid fishes will I am sure be welcome; and have I not a right to speak about snake-fishes? Did I not capture, in the middle of the South Atlantic, a fish which if it had measured fourteen feet instead of fourteen inches, would have created far more astonishment than the Regalecus Jouesii of Newman? My fish, Nemichthys scolopacea of Richardson, taken in the towing-net, and even now without a place in the ichthyological system, much more resembled a sea-serpent than Regalecus. It was scaleless, and had sharp pointed teeth, inclined backwards like those of a serpent. The body was ophioid and spotted on the sides; the eye was large and conspicuous; the jaws were very long, the gape was wide; and the back was furnished with a series of rays which extended, crest-like, from the nape to the end of the tail, which had no caudal fin."—P. 103.

This portrait will surely convince the most sceptical reader that, amongst the untold monsters of the ocean, fishes may exist that so closely resemble serpents that a seaman, who does not profess to be a naturalist, might well be forgiven for not knowing the distinction. One word more, let us never put in the mouths or minds of those who differ from ourselves words they have not uttered or sentiments they have not expressed. An author of the highest reputation argues that no saurian could exist in the ocean, and so as he supposes ends the controversy: let me remind him, in the first place, that no seaman has called it a saurian; in the second place, that if we translate serpent into the language of Science it means "ophidian," not "saurian;" and thirdly, that although an accomplished naturalist like himself or like Mr. Adams, might reasonably be supposed liable to mistake the root of a tree for a snake, sucha latitude cannot be allowed to the practised mariner whose home is on waters, and to whom such objects are as familiar as the albatross or the petrel, the porpoise or the whale, and whose eyes are trained by constant practice to estimate every object at its proper value.

EDWARD NEWMAN.

A List of the Birds of Cornwall. By EDWARD HEARLE RODD, Esq.

(Concluded from Zool. S. S. 2280).

Sandwich Tern.—A few pairs observed in the summer months on some of the islands at Scilly, where they annually breed: found sparingly on the Land's End coast.

Roseate Tern.—Abundant in summer at Scilly: breeds on Annet, a Scilly rock, and some other localities near. The bird exhibits in summer a most delicate hectic glowing blush-red on the throat, breast, and belly, which is more or less evanescent in some lights. The egg of the roseate tern is generally less blotched and more elongated than that of the arctic tern.

Common Tern.—More or less common in the summer in Mount's Bay, approaching nearer the shore in windy weather: less abundant at Scilly than the roseate or arctic terns, but it breeds annually there. The breast of the common tern in summer is of a glossy pearl-gray, sometimes approaching to nearly white: the base of the bill more scarlet-red than that of the arctic tern, which is shorter and coral-red throughout.

Arctic Tern.—A common species in summer both on our coast and at Scilly, at which latter locality its eggs may be obtained every year. In some seasons various parts of England are visited with large flights of these birds. The breast of the arctic tern is of a bluish and deep gray, as distinguished from that of the common tern.

Whiskered Tern.—An immature specimen obtained in the month of September, 1851, at Scilly: a rare and newly-discovered British bird; first included in the catalogue of British birds in 1836; little is known of its habits: observed in France, Hungary and Germany.

Gullbilled Tern.—A few examples only have been captured in England: there is one in a private collection at Penzance, presented by the Rev. Mr. Rice, of South Hill, together with a portion of the egg, which dropped when he shot the bird, near Brighton. In the latter part of May or beginning of June, 1852, an adult specimen was shot at Scilly by the Rev. John Jenkinson, which was submitted to my inspection: this species may therefore be added to the Cornish Fauna.

Lesser Tern.—Several examples of this small tern have been obtained close by the town of Penzance: not observed in summer at Scilly.

Black Tern.—Generally observed in the autumnal months, and nearly every year, in larger or smaller numbers, on the sea-side and inland. In its full black plumage it is rarely met with in Cornwall.

Sabine's Gull.—Rare: occasionally obtained in winter in its immature plumage. This bird has been mistaken for the little gull, but in its young state it may be known by the absence of black in the wing, by the greater length and slenderness of the beak, and by the tail being *deeply forked;* Mr. Selby, however, has erroneously described the tail of the little gull as *forked.* Both this species and the little gull assume black on the head and neck in the spring months.

Little Gull.—Rarely met with, but specimens in adult and immature plumage have been obtained at Penzance and the Land's End, the latter in the month of December, 1844. The young bird has a broad black bar on the wing somewhat resembling the immature kittiwake; bill stronger and more arcuated than the last-named species: tail with a black tip, and *square.* (See Sabine's gull.)

[One of the striking features of last winter's Ornithology was the extraordinary abundance of the little gull on our coasts.—*E. N.*]

Blackheaded Gull.—Not uncommon on the sands at Hayle, in winter, and occasionally remaining on till the summer plumage is assumed: specimens in both states of plumage obtained.

Kittiwake.—Common on our coasts generally; the birds of the year have two black bars on the wing, which is not the case with the other common gulls. The kittiwake breeds in large numbers at Scilly.

Ivory Gull.—Very rare: the only recorded example of this bird in

Cornwall was captured off the pier at Penzance, in the month of February, 1847, and the following note was taken at the time and reported in the 'Zoologist:'—Observed for some days previously associated with sea mews and herring gulls; alighted several times on the New pier, Battery rocks, &c., apparently not shy; note of the bird described as being like the warbling whistle of oystercatchers, the reverse of harsh and grating,—this peculiarity attracted the notice of men and boys at the quay, who are used to the screaming and clamorous cries of the common gulls. Length 17½ inches. Plumage studded with well-defined dusky-brown spots, some more obscure than others. (Abridged from the 'Zoologist.' See vol. for 1847, p. 1699).

Common Gull.—Generally distributed in larger or smaller numbers along our coasts.

Bonapartian Gull.—(See Yarrell's 2nd 'Supplement,' p. 55). An immature specimen killed in Falmouth Harbour, in June, 1865.

Cuneatetailed Gull.—(See Yarrell's 2nd 'Supplement,' p. 59).

Lesser Blackbacked Gull.—Generally distributed, and seen associated with the herring gulls in large numbers on our flat sands and open estuaries. Hayle, Marazion sands, &c.

Herring Gull.—The most common gull on our coast, and generally distributed in estuaries, creeks, open sands, and precipitous cliffs. There is no distinguishable difference between the egg of the herring gull and that of the lesser blackbacked gull.

Great Blackbacked Gull.—One or two may be seen, at all times and seasons, in different localities along our coast, frequenting rugged rocks and sometimes open beaches; generally seen singly, or in pairs. Hayle sands; Marazion sands; Land's End; Scilly Isles.

Glaucous Gull.—Occasionally observed, but by no means regularly or frequently. This bird, together with the Iceland gull (its smaller congener), may be known by the tips of the wings being white, which in the other species, excepting the ivory gull, are black.

Iceland Gull.—Rare: a specimen of the Iceland gull in the state of plumage almost amounting to pure white, with occasional brocoli-brown markings, was killed at Scilly: the inner or smaller webs of the quill-feathers were light brown, but the general appearance of the bird at a short distance was of an uniform dull white.

Common Skua.—Rarely met with in the western counties: observed at the Wolf Rock in considerable numbers in 1863.

Pomarine Skua.—Occasionally, and at uncertain intervals, occurring on our coast, and in every instance in immature plumage: specimens obtained from Mount's Bay.

Richardson's Skua.—Rarely observed on our coasts, and still more rarely in adult plumage. The figure in Bewick of the arctic gull is this species in adult plumage.

Buffon's Skua.—Very rare: a specimen found inland in the parish of St. Buryan, in adult plumage, is now in a private collection of birds in Penzance. (See note as to the possible existence of another small species of skua, in the 'Zoologist,' p. 7758).

[So very little was known of this species by Montagu, Bewick, Selby and Yarrell, that I may perhaps be excused for introducing a passage from Mr. Wheelwright, showing how well he was acquainted with its breeding habits and food; prefixing a brief but elegant passage from Wilson on the necessity of actual personal study of birds in preference to the all but universal plan of trusting to book knowledge: Mr. Wheelwright is an illustrious example of carrying out Wilson's views.

"The changes of plumage to which birds of this genus are subject have tended not a little to confound the naturalist, and a considerable collision of opinion, arising from an imperfect acquaintance with the living object, has been the result. To investigate thoroughly their history it is obviously necessary that the ornithologist should frequently explore their natural haunts; and to determine the species of occasional or periodical visitors, an accurate comparative examination of many specimens, alive or recently killed, is indispensable. Less confusion would arise among authors if they would occasionally abandon their accustomed walks, their studies and their museums, and seek correct knowledge in the only place where it is to be obtained, in the grand temple of Nature."—*Wilson.*

"Owing, as it was supposed up here, to the quantity of lemmings which swarm in these fells this summer, the Buffon's skuas were unusually numerous in this neighbourhood, and from first to last I obtained more than thirty specimens of old birds, besides many eggs and some young. But from all I could hear this was a very unusual occurrence, and years may elapse before they will appear again in such numbers in these fells, although a year never passes without some being seen. It appears, therefore, that the northern stretch of this large fell range is the summer home of this skua, which in winter is occasionally met with as far south as the British Channel. We got our first nest on the 3rd of June, and continued to take fresh eggs until the end of the month. I never but in one instance saw more than two eggs in a nest. Once I obtained *three*, and as I have taken a single egg from a nest hard sat on, it appears they do not always lay *two*, which, however, we may take to be the general number. The nest is nothing more than a few pieces of dried hay laid in a hole scratched in the ground, always in the vicinity of water, and I never saw it on a real snow fell. Although these birds live in colonies, you do not find the nests close together. None breed close to Quickiock, but in the fells about thirty miles to the west they breed in great quantities. No bird is more tame or fearless than the skua during the time they have eggs, for they come sailing close over your head when searching for the nest, performing the most beautiful airy gyrations, their long sharp wings and pointed tail giving them a single and pretty appearance when in the air. * * * Their principal food appears to be the common crowberry (*Empetrum nigrum*), a large beetle, and small Crustacea. I never saw anything except crowberries in the inside of young ones."—*Spring and Summer in Lapland*, p. 357.]

Greater Shearwater.—Occasionally seen, and specimens obtained from Mount's Bay; well known at Scilly, where it goes by the name of "hackbolt."

Manx Shearwater.—Well known at Scilly, where it annually breeds in rabbit-holes,—known there by the name of "coccathrodon." See an interesting account of this species in Yarrell's 'British Birds,' vol. iii., p. 509, from the pen of Mr. D. W. Mitchell, formerly of this town, and afterwards Secretary to the Zoological Society of London, Egg glossy, pure white.

Fulmar Petrel.—Very rarely observed in the South of England: one specimen taken alive at the Land's End, and another reported to have been captured in Mount's Bay.

Wilson's Petrel.—One specimen only obtained from Cornwall, and this was found dead in a field near Polperro; it passed into the hands of Mr. Couch, who forwarded it to Mr. Yarrell, whose figure of this bird was taken from the Cornish specimen.

Forktailed Petrel.—Several specimens of this small petrel have from time to time been obtained on our coasts, and it is not uncommonly met with very far inland, generally dead or in an exhausted state.

Storm Petrel.—Of frequent occurrence in the summer months, and observed at a distance of five or six miles out in Mount's Bay, sometimes in small flocks, in fine summer evenings at sunset, flying and hawking about in pursuit of small insects, in the manner of the swallow tribe, sometimes dipping, but seldom alighting on the sea, skimming for a few seconds with open wings, and mounting again in the air: whilst thus engaged, they appear to be wholly regardless of danger, and heedless of man. Abundant at Scilly, where they breed. Egg white, with a rufous zone at the larger end. When the storm petrel alights on ground, it appears incapable of perching or resting on its feet solely; it rests, or rather squats, on the whole length of the tarsus, and in moving hobbles along in this attitude, in the manner of the grebes and divers.

EDWARD HEARLE RODD.

Rare Eggs from North America. By HENRY REEKS, Esq., F.L.S.

THROUGH the kindness of Professor Baird, and the liberality of the Smithsonian Institution at Washington, I have recently received the following rare eggs (with others of less interest) from North America.

Botaurus lentiginosus.—Length 1·85 by 1·45. Colour uniform darkish olive. Taken Ottawa, Canada. No. in Smithsonian Collection 7095. W. T. Coleman.

Gambetta flavipes.—Length 1·65 by 1·15. Colour olive-brown, blotched thickly at the larger end with darker brown of two shades. No. 13385. Taken Fort Anderson, July, 1864. R. McFarlane.

Actiturus bartramius.—Length 1·67 by 1·25. Colour gray, thickly spotted with purplish brown, principally at the larger end, and not so pyriform in shape as the eggs of sandpipers usually are. No. 506. Taken Rock Creek. Wagon Road to Bridger's Pass, Rocky Mountains. K. T., June 8, 1857.

Anser Gambelii.—Length 3·35 by 2·45. Colour soiled white. No. 11752. Taken at Franklin Bay, Anderson River, 1865.

Mareca Americana.—Length 2·15 by 1·45. Colour cream or dirty white. No. 7734. Taken on the Arctic Coast, east of Anderson River.

Fulix affinis, Baird. Length 2·30 by 1·55. Colour pale buff, with olive tinge. No. 6642. Taken Youkon River, June 29th. J. Lockhart.

Somateria spectabilis.—Length varying from 2·50 to 2·65 by 1·70. Colour pale olive-green of various shades; only to be recognized by their smaller size from some eggs of S. mollissima (common eider). No. 12447. Taken Franklin Bay, Anderson River.

Larus atricilla. Length 2·20 by 1·50. Colour pale olive, blotched all over with brown of three shades. No. 6989. Taken Hog Island, Virginia. Dr. Hitz.

I had a difficulty in measuring these eggs, as they were most unfortunately broken *en route.* I shall be happy to lend these for inspection, or to be figured by any naturalists of repute.

HENRY REEKS.

Thruxton, Andover.

Extracts from a Memoir intituled 'A Monograph of the Alcidæ.'

By ELLIOTT COUES, A.M., M.D.

(Continued from S. S. 2296).

Genus BRACHYRHAMPHUS, *Brandt.*

With the general habitus of Uria proper, but of much more delicate build, different pattern of coloration, and very small size. Bill small, slender, much shorter than the head, not longer than the tarsus, greatly compressed, acutely tipped; culmen gently curved, its ridge sharp, rictus nearly straight, gonys straight; tomial edge of upper mandible greatly inflected towards the base, notched near the tip. Nasal fossæ small and shallow, nearly filled with feathers, which mostly cover the extremely minute oval nostrils. Wings of ordinary length, very narrow, pointed, falcate, the secondaries extremely short. Tail of ordinary length, almost square, the feathers obtusely rounded. Feet very small, short, slender and weak; tarsus scarcely compressed, variable in length, never longer than the middle toe without its claw (except in brachypterus?). Outer and middle toes equal in length; the claw of the former much smaller than that of the latter; the inner very short, its claw not reaching the base of the middle claw. Claws small, weak, moderately curved, very acute.

The genus which comprises the Murrelets—to coin an English word, needed for the Brachyrhamphi—is a very natural and strongly marked one. It comes nearest to Uria proper, from which, however, it is sufficiently distinguished, as will be seen by the above diagnosis. It contains four or five species, all inhabitants of the North Pacific, and more particularly of the west coast of North America. These may readily be diagnosticated as follows:—

I. Tarsus much shorter than the middle toe without its claw.
  Upper parts blackish and chestnut, lower parts blackish and white. - - - - - - - 1. marmoratus.
  Upper parts cinereous and white, lower parts pure white. 2. Wrangeli.
II. Tarsus just as long as the middle toe without its claw.
  Under surface of wings white. - - - - 3. hypoleucus.
  Under surface of wings dusky. - - - - 4. Craveri.
III. Tarsus longer than the middle toe without its claw (teste Brandt). 5. brachypterus?

Brachyrhamphus marmoratus (Gm.) Brandt.—Habitat: coasts and islands of the North Pacific. On the American side, south in winter to California; breeds as far south as Vancouver's Island.

Form typical of the genus, as just described. Bill along culmen just the length of the tarsus; tarsus scarcely three-fourths the middle toe without its claw.

Adult, breeding plumage (description from a male specimen in the Museum of the Smithsonian Institute, procured June 9, 1867, from Vancouver's Island). Bill black. Tarsi posteriorly and both surfaces of the webs blackish; legs anteriorly and toes superiorly livid flesh-colour, or dull bluish gray. Iris brown. Entire upper parts brownish black, everywhere transversely barred with chestnut-brown, or bright rust-colour, except on the wings, which are uniform brownish black, the primaries darkest, their inner webs brownish gray towards the base. Under surface of wings smoky brownish black. A few whitish feathers variegated with chestnut and dusky on the scapulars. Entire under parts, including sides of head, neck and body, marbled with sooty brownish black and white. The feathers are white, with the tips of the dark colour. The white rather predominates on the middle of the breast and belly, the dusky on the other parts; the latter colour being nearly uniform across the throat, and on the long feathers of the sides and flanks. Specimens vary a great deal in the precise amount of rusty brown on the upper parts, and of dusky mottling on the lower; but, so far as known, are never without this distinctive coloration in some degree; and it becomes heightened at the breeding season.

Length about 10·00; extent about 18·00; wing 5·00; tail 1·50; tarsus ·70; middle toe 1·00, its claw ·20; outer toe and claw 1·15, inner toe and claw ·90; bill along culmen ·70, along rictus 1·35, along gonys ·55, height opposite base of nostrils ·25, width at same point ·20.

This species was originally described by Pennant as the "marbled guillemot," whence Colymbus marmoratus of Gmelin. His description is that of the adult, in breeding plumage, but has been almost universally supposed to refer only to the young; and a very different species has been usually held to be the adult, as shown in the next article. It is also evidently the Cepphus perdix of Pallas.

Audubon's figure and description of the supposed young of this bird, under the name of Uria Townsendii, is really that of the adult. His figure of the supposed adult appears rather to represent Wrangeli.

It is difficult, perhaps impossible, to determine Uria brevirostris of Vigors. This is evidently, as far as can be judged by the description, a young bird. It belongs to the short-legged group of the present genus; but whether it is the young of marmoratus or of Wrangeli, is a point which cannot be decided. The expression "capite dorsoque albo-notatis," and the absence of any mention of rust-colour in the description, would lead one to assign it rather to Wrangeli.

Brachyrhamphus Kittlitzii of Brandt is another bird which has not been identified since its original description. Like U. brevirostris it is evidently a young bird, of the short-legged group; and the expression "fusco-flavescente undulata" induces the presumption that it is really only a young marmoratus. But it is possible that both it and B. brevirostris may be the young of the same species, or of two different species, which yet remain to be identified. It is not probable, however, that either of these names represent valid species, distinct from each one of those recognized in this paper.

Brachyrhamphus Wrangeli, Brandt.—Habitat: Aleutian Islands, and north-west coast of America; south to Puget's Sound, and perhaps further. Numerous specimens in the Museum of the Smithsonian Institute.

Description (from a perfectly adult male specimen in the Museum of the Smithsonian Institute, from Sitka, March, 1866).—With the size and proportions of the several members as in marmoratus; the bill absolutely shorter, relatively rather stouter. Bill scarcely as long as the tarsus. Tarsus much less than middle toe without claw.

Adult.—Entire upper parts, except the scapulars, very dark cinereous; the centre of the feathers, particularly on the back and rump, blackish, causing these parts to appear obsoletely waved with blackish and cinereous; the crown of the head, the wings and the tail, almost black, the larger wing-coverts just appreciably white-margined; scapulars almost entirely pure white, forming two conspicuous broad longitudinal bands. Under wing-coverts dusky brown; inner webs of the primaries the same, not fading, even at their extreme bases, into whitish. Entire under parts pure white, immaculate, except some dusky streaks on the long feathers of the sides and flanks. This white on the sides of the head invades the lores to the level of the top of the orbits, and extends into the nasal fossæ; then lowers a little, so that the eyes are left in the dark colour of the top of the head; then on the nape extends almost to the median line, across which a few white feathers extend to the white on the other side, forming an imperfect nuchal collar; then extends in a straight line down the middle of the side of the neck. On the sides of the rump the white extends around so far that the cinereous is only left as a band an inch wide. This white on the sides of the rump is as apparent upon the upper surface as that on the scapulars; it is directly continuous with that of the under parts, but on the flanks the long overlying cinereous feathers appear to separate it. Bill wholly black. Tarsi posteriorly and toes inferiorly blackish; rest of the feet, including both surfaces of the webs, probably flesh-coloured in life; dull yellowish white in the dried skin.

Length "10·00, extent 18·00" (collector's label); wing from carpus 5·00; tail 1·50; tarsus ·70; middle toe without claw ·92, its claw ·20; outer toe and claw 1·10; inner toe and claw ·88; bill along culmen ·60, along rictus 1·25, along gonys ·45, its height at base of nostrils ·22, its width at same point ·19.

Young (described from a specimen in the Smithsonian Museum, from Sitka, July, 1866; just fully fledged; the bill has still the white horny knob at tip of upper and under mandible, showing the juvenility of the specimen).—Bill very small, weak, short, imperfectly developed, about a third as long as the skull; ·45 along culmen; tarsus ·55; middle toe and claw 1·00; wing only 4·25. Entire upper parts blackish, much darker than in the adult, with only a just appreciable shade of cinereous; the scapular white present, but restricted in extent, and interrupted by imperfect bars of dusky across the feathers. Entire under parts white. Everywhere, except on chin, middle of abdomen, and under tail-coverts, thickly marked with delicate waved lines of dusky, most numerous across the throat, largest on the sides and flanks, where some of the longer feathers are mostly dusky, finest on the lower breast. The whitish on the sides of the head does not extend so far, and merges insensibly into the dark colour; on the nape a delicate line of white feathers almost forms a collar. The under wing-coverts are as in the adult. Bill blackish. Legs and feet anteriorly more dusky than in the adult.

Another specimen in the Smithsonian Museum, taken in January, marked female, and evidently hatched the preceding summer, has the size of the adult, and the colours generally as in the young bird just described. But the upper parts are much lighter and more decidedly cinereous, as in the adult; the scapular white well developed; the dusky waving of the under parts confined to the sides and throat. The under wing-coverts are dusky along the edge of the wing, but are elsewhere variegated with dull whitish; only to a small degree, however, not approaching the condition seen in hypoleucus.

In mature plumage this is a very handsome bird, and recognizable at a glance by the pure white of the under parts, and blackish cinereous of the upper, relieved by the conspicuous white of the scapulars and sides of the rump. It belongs to the short-legged division of the genus, being very different from hypoleucus and Craveri in the proportions of the tarsus and toes. It has the size and form of marmoratus in every respect except a just fairly recognizable difference in the shape of the bill. But it is quite a different species from marmoratus—so different, in fact, that no special comparison need be instituted.

The recognition, in the bird here described, of Brachyrhamphus Wrangeli of Brandt is a matter of unusual interest, identifying, as it does, a species long ago described, but almost unknown to ornithologists at large, and throwing light upon what has always been a very obscure point in American Ornithology. The writer is mainly indebted to Prof. Baird's suggestions for the fortunate direction of his investigation in this case. The present species has hitherto been regarded and described by American writers as the *adult* of the well-known marmoratus, whose curious colours, as described by all authors from Pennant downwards, and as figured by Audubon under the name of Uria Townsendii, have always been considered as indicative of immaturity. But numerous specimens, in adult *breeding* plumage, demonstrate the falsity of this view, as is satisfactorily set forth in the preceding article. Beyond the possibility of a doubt, the present species is not marmoratus, and it is certainly Wrangeli of Brandt.

Brachyrhamphus hypoleucus, Xantus.—Habitat: coast of California. Specimens in the Museum of the Smithsonian Institute and in the Museum of the Academy of Sciences, Philadelphia. So far south, in summer, as Cape St. Lucas, Lower California.

Description (from a female specimen in the Smithsonian Museum, from San Diego, January 27, 1862; a typical example).—Bill along culmen half as long as the skull, three-fourths as long as the tarsus, as long as the middle toe and half its claw, very slender, much compressed, higher than wide at the base; culmen gently curved its whole length; rictus nearly straight; gonys perfectly straight; outline of the very slender mandibular rami a little concave. Tarsus just as long as the middle toe without its claw! Tip of inner lateral claw not reaching base of middle one. Wings and tail of usual shape; the latter contained about two and a third times in the length of the former from the carpus. Under tail-coverts reaching (in this specimen) just beyond the end of the tail. Entire upper parts uniform cinereous, not varied by white. This colour is slightly darker, and more blackish plumbeous on the head. It extends on the sides of the head just to the eyes, the lids of which are of this colour, a little further down on the auriculars; thence in a straight line along the middle of the side of the neck to the shoulders; thence in a straight line along the sides under the wings, where it is nearly an inch broad; the elongated feathers of the flanks are also mostly of this colour. Other under parts entirely pure white. Under surface of wings entirely pure white! Primaries black on the outer web; the greater part of the shaft and inner webs white; the terminal portion of the shaft and inner webs brown. Tail-feathers black, the inner webs somewhat brownish. Bill black, the base of the lower mandible whitish; feet anteriorly dull yellowish, posteriorly dusky, in the present dried state; "bill black, feet whitish blue, black below" (label).

"Length 10·50; extent 17·50" (label); wing 4·80; tail 1·70; tarsus ·95; middle toe without claw ·95, its claw ·20; outer toe and claw 1·10; inner do. ·90; bill along culmen ·80, along rictus 1·30, along gonys ·45; depth at base ·22; width ·19.*

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* The following is the original description of the type specimen:—"Bill slender and slightly curved, about half the length of head. Tarsus scarcely shorter than the middle toe [and claw]. Above dark brownish black, the edges of the feathers with a decided plumbeous tinge; the side of neck below, and the axillars with the concealed portion of the sides of the breast, ashy plumbeous. Entire under parts, including tail-coverts and inside of the wings, pure white, this colour extending on the sides of the head so as to include the eyes; the lids, however, are tinged with dusky; bill black; legs apparently reddish in life.

"Length 10 inches, extent 15·80, wing 4·70, tail 1·80, bill above ·70, gape 1·20, The specimen above described, collected at San Diego, California, by Dr. J. G. Cooper, is a little larger than the type, as will be seen by comparing the measurements with those in the accompanying foot-note. It is also described as representing the perfect plumage,—the type being imperfect in this respect. The upper parts are of a uniform very dark cinereous, without a shade of brown; the latter hue only occurring in specimens with worn and faded plumage. In the original description, here appended, the indications of the size of relative lengths of the tarsus and middle toe are made without reference to the claw; which fact explains an apparent discrepancy between the present description and the original one. The tarsus is exactly as long as the middle toe without its claw.

This is a very strongly marked species. The most striking diagnostic feature is the pure white of the under surface of the wings. In the uniformity of the cinereous colour of the upper parts it is also unique. Nearly the same length of tarsus is found in B. brachypterus, *Brandt*, and Craveri, *Salvadori;* the tarsus is much shorter than the middle toe in Wrangeli, *Brandt*, marmoratus, *Gm.*, "Kittlitzii," *Brandt*, and "brevirostris," *Vigors*.

This species is certainly not the Uria brevirostris, *Vigors*, from San Blas. This is described as having "alæ suprà et *infrà*, tectricesque inferiores fuscæ, * * tarsi $\frac{1}{2}$," which settles all questions on this score. It has the same dimensions, and the same relative length of tarsus and toes as Craveri, *Salvadori*, also from the coast of Lower California; but the latter appears to be a different species, as will be discussed further on. It seems nearest to brachypterus, from Unalaschka; in fact there is nothing in Brandt's brief diagnosis preventing the reference of the present species to brachypterus, except the expression "tarsi digito medio longiores." But in view of this discrepancy, and of the widely separated localities whence the two species are described, it would be unsafe to take their identity for granted. It is much the best course to retain the present species as it stands, under the name hopoleucus, which has the merit of being positively identified, as is not the case as yet with brachypterus.

Several excellent examples of this species from various points along the coast of California are in the collections of the Smithsonian Institution and Philadelphia Academy. They present no individual

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tarsus ·85, middle toe [with claw] 1·00. This specimen is considerably weather-beaten, and the old feathers of the upper parts are much worn, and bleached at the edges. The new ones are, however, as described."

differences worthy of special mention; except in the instance of the type specimen, which is brownish above, from the faded and worn condition of the plumage.

This species has probably the southernmost range of any of the family; occurring in summer at Cape St. Lucas. It was observed by the writer in December, 1865, off the coast of Mexico, about latitude 21° N.! Its extension northward remains to be ascertained. At present it is not known to occur north of the coast of Lower California. Its southern habitat, as remarked by Prof. Baird, is a fact of great interest, when it is recollected how truly boreal are nearly all the species of the family.

Brachyrhamphus Craveri (Salvad.), Coues.—This recently described species has much the same habitat as B. hypoleucus, and very much resembles the latter. The dimensions are the same in both, and the colours are very nearly alike. Prof. Baird has received from Sig. Salvadori, and kindly transmitted to the writer, a life-size figure of the bird, accompanied by a note in which it is stated that "the lining of the wings is blackish, and some feathers are white-edged." This fact at once distinguishes the species from hypoleucus, providing the latter, in all stages of plumage, has the under-surfaces of the wings white, as is most probable, judging by what is known of the variations in plumage of the birds of this genus.

Waiving the bare possibility of this bird being a *young* hypoleucus, it cannot be referred to any described species, and must be regarded as a valid one. That it is not brevirostris, *Vigors*, is sufficiently evident from the dimensions, the tarsus of the latter being only half an inch long.

Brachyrhamphus brachypterus, Brandt.—"Suprà cinerea, alis caudaque nigricantibus. Collum subtus et in lateribus, pectus et abdomen alba. Rostrum capitis dimidii circiter longitudine. *Tarsi digito medio longiores.* Longitudine a rostri apice ad caudæ apicem 9. Patria Unalaschka."—*Brandt, l. c.*

This species is wholly unknown, at least on this side of the Atlantic, except by the above cited description of Brandt. It has nothing to distinguish it from some other Brachyrhamphi except the length of the tarsus. This, however, if it really obtains, is sufficient to distinguish the bird from all others, not only of the genus, but of the family; for no known alcidine bird has the tarsi longer than the middle toe.

(To be continued.)

Ornithological Notes from North Lincolnshire.

By JOHN CORDEAUX, Esq.

(Continued from S. S. 2089.)

THE HUMBER MUD-FLATS IN AUGUST.

THE various shore birds frequenting this coast are returning much earlier than is usual. This I observed was also the case in the dry summers of 1864 and 1868, hot and forward seasons being invariably favourable to the early nesting and growth of the young of our northern migratories. As early as *the first week in the month* small flocks of knot appeared on the coast, followed later by several other species. The ingathering of our splendid harvest having for some weeks, early and late, fully occupied me, left no time for Ornithology: frequently, however, when returning late in the evening from my marsh farm, I have recognized the familiar call-notes of the shore birds, or marked their serried ranks as they dash and wheel in rapid flight over the fore-shore, and have been astonished at their number and early appearance, for never since I have known these flats have I seen so many and various flocks so early in the season.

This afternoon (August 29th), having a few hours to spare, with my telescope,—a tried and trusted companion in many a coast ramble,—I took the nearest road to the shore, with the determination of giving up the remainder of the day to birds, and birds only. The result of the afternoon's walk was so satisfactory, and I may add unexpected, that I think a detailed account may perhaps interest the readers of the 'Zoologist.'

Near the Humber embankment I had to cross a field of summer-eaten clover, from which the sheep had a few days been removed. It was very bare, little but the clover roots remaining. In this field were a mixed flock of dunlin and ringed dotterel. My glass shows me that they are mostly at rest: some stand with the head turned back over the shoulder; others, in the same position, nestle close to the ground; they all have their front towards the wind: a few bright and pretty ringed dotterel are walking leisurely to and fro, stopping occasionally to pick up something from the ground; but feeding at present is evidently not their object: with these dotterel are two sanderlings, distinguishable from the dunlins by their much lighter colour and short beak. Mixed indiscriminately amongst the flocks are several starlings, and, oddly enough, these habitual day-feeders had followed the example of the waders, and were taking an afternoon nap.

Nearer to me, within less than a hundred yards, are four birds, both larger and darker-looking than the dotterel: they are running rapidly about, exhibiting an energy in singular contrast to the slumbering flock; they are turnstones, birds of the year, and for the next half hour I am delighted to have an opportunity of quietly watching their mode of feeding. They run quickly, now here, now there, and keep constantly jerking over the fragments of dried sheep-dung with which the land is almost covered. In many cases this is no easy task, as it is dried with the sun, flattened to the surface, as well as clover-grown, yet it is surprising with what ease, by a rapid down and upward movement of the head and shoulders, this is effected, and they seldom fail to pick up some concealed insect underneath. On an examination of the ground I find the dung shelters several small species of Coleoptera, and on these doubtless the turnstones were feeding.

There are many hundreds of gulls on the flats, principally brown-heads, both old and young: some of the former have lost the summer cap, in others it is still perfect. The gulls are, now the close season is over, becoming very shy and wary: they all rise as soon as I show myself, and with loud clamour seek the river. Half-way down the flats a flock of knot are feeding, and my glass is again brought into requisition. There appears to be about three hundred. The greater portion, four out of five I should say, are birds of the year, and have buff-coloured breasts. There are others, however, which exhibit, in a greater or less degree, the rusty red pectoral plumage of summer. These old birds are all in a transition state, and I do not see one in the full plumage of summer.

At the mouth of the creek, where the main drain enters the Humber, are a pair of old great blackbacked gulls, magnificent fellows, in brilliant plumage: they are excessively wary, and on this flat coast an old full-plumaged bird is as difficult to bag as the great northern diver himself. As I lift my head above the level of the embankment they rise, and with slow flappings make towards the centre of the river. To the left of the creek some curlew and whimbrel are feeding: the latter stand in a row along the edge of the river, washing and preening their feathers. Two birds here cross the bank, within easy shot, but I have no gun with me: they look like golden plover; I mark them down in one of the pastures, and hope to have later in the day an opportunity of making their acquaintance. Half-a-mile above the outfall there is another flock of knot; at a rough calculation there are five or six hundred. This flock, like the other previously examined, is composed principally of young birds. There are, however, a few old birds amongst them yet retaining the full summer dress, others are in the transition. Some are washing in the salt water pools, others feeding, many with the bill turned backward and sleeping. With the knot are twelve bartailed godwits, two in perfect summer plumage, others in transition, the remainder apparently birds of the year: they are all feeding, as godwits usually do, as if they had no time to spare. I have before in this journal described their manner of foraging, running rapidly over the flats, and constantly probing the mud with their long bills, as if feeling for their food. It is easy to see when they are successful, as then every motion of the bird displays extreme energy, and the fore part of the head is often thrust underneath in their efforts to reach and hold some concealed creature. In this case their prey was evidently some species of annelid: often when the bill was withdrawn I perceived a large worm dangling from it: this required a little manipulation before it could be swallowed. The bird's head would be thrown back, and the mandibles rapidly worked till the worm became properly adjusted, when down it would go, the neck perceptibly swelling and thickening in the operation, just as we have seen a thrush or blackbird bolt a lobworm. There is then a satisfied smack of the mandibles, and the search recommences. I have often thought when watching godwits that the slightly recurved form of bill is admirably adapted to their mode of searching the ground, that shape being the best suited to penetrate easily the mud, the bird at the same time advancing. The position and curve of the teeth of many of our agricultural implements, especially constructed for penetrating the soil, will best illustrate my meaning. Beyond the knot and godwit, and close to the edge of the advancing tide, are three gray plover; all have the black breast of summer.

I had closed my telescope and was leaving the embankment when I observed nine large birds crossing the flats, flying directly towards me: they were about the size of whimbrel, for which I mistook them, and should have gone away with this impression had it not been for their call-note, uttered as they swept onward with half-closed wings amongst the knot and godwit: their note, totally unlike the "bleat" or "whelp" of godwit, resembled (for so I wrote it down on the back of an envelope at the time) the word "critty, critty, critty," rapidly repeated. The glass at once shows they are amongst the rarest of our shore birds, blacktailed godwits. Some are old birds, two yet in the beautiful summer dress, another is changing to the winter plumage, the rest appear birds of the year. On alighting they commenced feeding with the "bartails," affording a most favourable opportunity of comparing the two species. The most obvious distinction when we see them side by side is the much larger size of L. melanura, and their longer legs and bill: this difference in size looks as comparatively great as that between the curlew and whimbrel. In other respects their habits are much alike, and they seem equally fond of washing and preening their feathers. They are much shyer, however, than the bartailed species.

All this time the tide was rising and rapidly covering the flats; the whole company of birds slowly retreating before it, and approaching the embankment. I have never before in August seen so numerous and goodly a company. Now that the harvest is gathered these marshes have a bleak and wintry aspect, and the effect to-day increased by the heavy masses of piled cumuli in the north and west—had it been winter these cloud mountains would certainly presage a snow-storm: as I am leaving the coast the sun for a few moments bursts out from behind the cloud range, illuminating the brown river and its dreary belt of mud with floods of light, and brings out in strong relief the various troops of gulls and waders dispersed over two miles of foreshore. But my luck was not yet over: walking homewards across the marsh pastures I disturbed a small flock of waders: they soon settle again and prove old acquaintances, a ruff and seven reeves, the former now without his brilliant nuptial garb, and only distinguishable from the reeves by his larger size. In this same field were the two birds marked down two hours previously: as I had expected, they proved golden plover, both young birds of the year: they permit me to walk past within less than twenty yards, and even stand without taking the alarm.

Probably few places on our east coast can at this time show a more varied and interesting assembly of shore birds than the Humber flats. In less than four hours I have seen curlew, whimbrel, bar and black-tailed godwit, knot, ringed dotterel, dunlin, sanderling, turnstone, gray and golden plover, and ruff and reeves; besides great and lesser blackbacked gulls, "brown-heads," common and herring gulls.

I have neither seen nor heard any greenshank during the month, and what is rather remarkable, considering they are by no means uncommon at this season, no redshank.

JOHN CORDEAUX.

Great Cotes, Ulceby, Lincolnshire,
September 8, 1870.

A List of the Hemiptera collected by J. K. Lord, Esq., in Egypt, along the African Shore of the Red Sea and in Arabia; with Descriptions of the Species new to Science. By F. WALKER, F.L.S.

KLUG, in his 'Symbolæ Physicæ,' has contributed much to the illustration of the insects of Arabia, but the Entomology of Egypt has been for the most part neglected. The latter region, once the bed of a sea, was gradually peopled with an insect-fauna, partly resembling that along the shores of the Mediterranean, and of which there are some traces on the sandy sea-coasts of England. This fauna has been modified by the very ancient cultivation of the soil, and by the agency of the Nile in distributing along its banks some of the products of the interior of Africa.

The localities in which insects were collected by Mr. Lord are as follows:—

Egypt. — Cairo, Shoobra, Heliopolis, Red Mountain, Geezech Pyramids.

Africa, near the Red Sea. — Berenice, Souakin, Hor Tamanib, Massowah, Sheyk Berout, Akeek (island), Harkeko, Dahleck (island), Rafla (Annesley Bay), Tarjora (Straits of Bab-el-Mendeb), Akeeko (Arab village), Zayla (Indian Ocean).

Arabia.—Wâdy Gennèh, Wâdy Amara, Wâdy Sidri, Wells of Moses, Pharoah's Baths, Wâdy Ferran, Wâdy Nash, Wâdy-es-Sheykh, Tór, Wâdy Gharandel, Wâdy Hebran, Plain of Ramleh, Gebel, Musa (Mount Sinai), gardens round Mount Sinai, sandy plains (Mount Sinai), Convent Garden (Mount Sinai), Wâdy Atall.

Fam. PACHYCORIDÆ.—Gen. LIBYSSA, *Dallas*.

1. 12-*punctata*. Cimex 12-punctatus, *Fabr. Ent. Syst. Suppl.* 527. Hor Tamanib. Inhabits S. Africa and Madagascar.

Fam. EURYGASTRIDÆ.—Gen. TRIGONOSOMA, *Delaporte*.

2. *Falcata*. Cimex falcatus, *Cyrillo, Ent. Neap.* 5, pl. 6, f. 9. Mount Sinai. Inhabits S. France, Trebizond, Sicily, Egypt and Ceylon.

Fam. CYDNIDÆ.—Gen. ÆTHUS, *Dallas*.

3. *Brunneus*. Cydnus brunneus, *Fabr. Syst. Rhyn.* 185. Cairo. Inhabits S. Europe and Syria.

Gen. CYDNUS, *Fabr.*

4. *Aterrimus.* Cimex aterrimus, *Forster, Nov. Ins. Sp.* 71. Cairo. Inhabits S. Europe.

Fam. HALYDIDÆ.—Gen. AGONOSCELIS, *Spinola.*

5. *Versicolor.* Cimex versicolor, *Fabr. Ent. Syst.* iv. 120. Zayla. Inhabits W. Africa, S. Africa and E. Africa.

Gen. MUSTHA, *Am. et Serv.*

6. *Spinosula.* Halys spinosula, *Lefebvre, Mag. Zool.* 1831, pl. 21. Wâdy Gennèh. Inhabits Greece, Turkey and Egypt.

Fam. PENTATOMIDÆ.—Gen. ANTESTIA, *Stal.*

7. *Flavovaria.* Rhaphigaster flavovarius, *Dallas, Cat. Hem.* 288. Harkeko. Inhabits Hindostan.

Gen. STRACHIA, *Hahn.*

8. *Placens.* Metallic-green, roughly punctured; markings luteous, partly whitish. Head in front of the eyes with a slender border, which is accompanied by a streak on each side, above and beneath; underside, pectus and abdomen luteous, the latter with black dots on each side. Antennæ black. Prothorax with a border, with a stripe, with a band near the fore border, with an oblique streak proceeding from the band on each side hindward, and with a callus where the band traverses the streak. Scutellum with a clavate streak on each side and an apical spot. Each fore wing with a streak along the base of the fore border and two streaks in the disk, the hinder streak transverse; membrane black. Legs luteous; femora with a black streak near each tip; tarsi and four posterior tibiæ towards the base black; fore tibiæ mostly black. Length of the body 3—3¼ lines. Wells of Moses. Wâdy Nash. Mount Sinai.

9. *Amœnula.* Black with luteous markings, finely punctured; under side and legs luteous. Head luteous, with an irregular black band on the hind border. Antennæ black. Prothorax with a stripe and with two dots on each side; fore border and sides also luteous. Scutellum luteous, with a large semicircular basal black spot, which is divided by a luteous longitudinal line. Fore wings with a stripe along the fore border and with two little contiguous streaks. Length of the body 2—2½ lines. Mount Sinai.

Gen. RHAPHIGASTER, *Delaporte.*

10. *Prasinus.* Cimex prasinus, *Linn. Syst. Nat.* i. 722. Cairo. Harkeko. Inhabits Europe, W. Indies, S. America, Africa, Asia, New Zealand, and many eastern islands.

11. *Flavolineatus,* Hope, Cat. Hem. 31. Hor Tamanib. Inhabits Hindostan, Ceylon, and some eastern islands.

Fam. EDESSIDÆ.—Gen. CYCLOPELTA, *Am. et Serv.*

12. *Funebris?* Cimex funebris, *Fabr. Ent. Syst.* iv. 116. Wâdy Ferran. Inhabits W. Africa. This specimen here recorded may be a different species.

Fam. COREIDÆ.—Gen. GONOCERUS, *Latr.*

13. *Notatus.* Cimex notatus, *Thunb. Nov. Ins. Sp.* 27. Harkeko. Massowah. Inhabits S. Africa.

(To be continued.)

The Horn of the Indian Rhinoceros Moveable.—Interested, like very many others, in the curious feat of self-mutilation performed by the male rhinoceros at the Zoo, I paid him a visit on Saturday, August the 27th, expecting to see the horn itself adorned with a label notifying the particulars of so extraordinary an event: in this I was disappointed; but I made an observation on the female rhinoceros which was so new and interesting to me that I think it worth recording. It has long been observed by all who habitually frequent these gardens, that this horn topples forward over the creature's mouth, and has thus assumed a very extraordinary appearance; but it has not been recorded, or I should perhaps say that I have seen no record, of the horn being moveable, not perhaps at the will of the animal, or by the assistance of any muscles connected with the horn, but by the application of some external power, such, for instance, as that of a man's hand. I saw this phenomenon exhibited several times by a visitor at the gardens, and it was very evident that the horn was *loose*, just in the same sense as we speak of a loose tooth. It is, I believe, an opinion now universally received, that the material of which the horn is composed is exactly the same as hair, that it is in fact neither more nor less than conglomerate hair; but there is nothing in this to induce the belief that it could be moved independently of the head, and indeed independently of the skin, for as the operator rocked the horn very gently to and fro a slight fissure became evident between the base of the horn and the skin immediately surrounding it, so that it not only seems probable that this creature may shortly become hornless, like its mate, but it suggests the idea that the horn of the rhinoceros, like that of the stag, may be deciduous and renewable. In connection with this subject the following note by a well-known zoologist will be found highly interesting: it is extracted from the 'Field' newspaper of the 10th of September.—*Edward Newman.*

The Lesser One-horned Rhinoceros in England.—Happening to take up the volume on pachydermatous mammalia in the 'Naturalist's Library,' I was surprised to discover that the "Indian rhinoceros," of which two figures are therein supplied, is the lesser one-horned species, R. sondaicus, and not R. indicus as heretofore considered. This is at once shown by the fold at the base of the neck—in addition to that behind the shoulders—being continued across, which is never the case with the larger R. indicus, and also by the uniformity of size of the small tubercles which stud the body, shoulders and haunches. The dimensions of the adult animal equally prove the correctness of this identification: "height from the highest part of the back 4 ft. 8 in.," &c. The specimen was "a male, and was brought from Bengal, having been for some time kept in the gardens of the Governor-General at Calcutta," *i.e.* in Barrackpore Park. It is now ascertained to be the species which inhabits the Bengal Sundarbáns. "He has been sixteen months in Britain," it is added, "during which time he has visited London, Glasgow and Edinburgh, and is at present" (*circa* 1835) "the property of the proprietors of the Zoological Gardens at Liverpool. It is stated to be six years old, and to weigh two tons; is a beautiful specimen, and appears to be in the highest state of health." Upon a former occasion (*loc. cit.*) I showed that both the R. javanicus and the R. sumatranus of F. Cuvier are founded on native drawings of the latter species, which I prefer to call the Asiatic two-horned rhinoceros, and the other the lesser one-horned rhinoceros, now that we know that both of them have an extensive range on the mainland of S.E. Asia. What I here bring to notice is the fact that we have had R. sondaicus alive for many years in this country without anybody knowing it.

Note on Cervus Alfredi, the new Indian Deer, at the Zoological Gardens.—Your correspondent R. A., of Bangalore, pronounces authoratively (p. 173) that "the Cervus Alfredi is no other than the common hog deer, C. porcinus, the 'dray' of Burma and the Malay coast." I beg to assure him that he is mistaken. Undoubtedly it is a species akin to the "para" of Eastern Bengal, "dray" or "durai" of Arakan and the Tenasserim provinces, which I know familiarly to be the true porcinus; but in the Zoological Gardens, Regent's Park, both species may now be seen, and their identification as the same is out of the question. One remarkable feature of C. Alfredi is the smallness of its ear-conch as compared either with C. porcinus or C. axis; and, moreover, this part is uniformly filled up with shortish hairs interiorly, not partly nude within, with the usual stripes of long hair seen in its immediate congeners. It is, moreover, different in shape from—not so broad as—that of the hog deer. The tail is like that of the axis deer, but shorter, and black instead of brown above; not bushy like that of the hog deer, as it holds it up when running. I may add that I never before heard of C. porcinus anywhere in the Malayan peninsula; but it is worthy of remark that the C. axis, or Indian spotted deer, is stated to have been introduced both in Province Wellesley and Sumatra, where it is not impossible that C. Alfredi may have been mistaken for it.—*From the 'Field.'*

Otter in the Tame.—A dog otter was shot last night in the River Tame, about a mile below this town. Length from nose to tip of tail 49 inches; girth 18½ inches.—*Egbert D. Hamel; Bole Hall, Tamworth, September* 20, 1870.

Lesser Kestrel near York.—I regret that I have not before answered the editor's summons to give some additional information about the lesser kestrel (*Tinnunculus* *cenchris*) supposed to have been shot near York. The name of the gentleman who shot it and skinned it is Mr. Harrison, and the place it is stated to have been killed at is Greenhammerton, near York.—*J. H. Gurney, jun.; 2, Beta Place, Alpha Road, N.W.*

Hen Harrier.— On Monday a male hen harrier (*Falco cyaneus*) dashed into a net at Preston after a starling as decoy. Curiously enough, two harriers did the same thing at the above-named spot on the 8th of November, 1867, in a net belonging to the same person who caught this bird. The fact leads me to remark how constantly Nature repeats herself, and particularly in the matter of Ornithology, as I have often found to be the case.—*George Dawson Rowley; Chichester House, Brighton, August* 24, 1870.—*From the 'Field.'*

Supposed Occurrence of Strix asio in Kent.—Undeterred by the adverse opinions of our most distinguished ornithologists, I cannot help returning to the charge about the owl that I saw last spring, which I still believe to have been Strix asio. Certainly I made a mistake sufficient to raise doubts in any mind when I said it was eleven inches long, but I am now convinced it was only about eight inches long. I maintain that no argument can prove that Strix otus ever has several distinct white spots on its wings; whereas Linnæus describes Strix asio as possessed of "quinque maculis albis." Audubon's plate of Strix asio represents my bird exactly, even to the very attitude. As to the idea of its being the little owl, I know an eared from an earless owl: a long-eared owl may perhaps depress its ears like a hare, so as to appear almost like an earless owl; it cannot shorten them. One glance at a plate of the Scops eared or mottled owls will show what I mean by short ear-tufts.—*Clifton; Cobham, September* 22, 1870.

Owl chased by Rooks.—Late one evening in July, walking out towards Preston, I was surprised to see in a field on the opposite side of the road, and only a few yards from a low fence by the road-side, an owl (*Syrnium stridula*) flying towards me pursued by seven or eight rooks: on arriving at the hedge, the rooks gave up the pursuit, and joined a large flock which were sitting in the upper end of the field, whilst the owl took refuge in some elms bordering the side of the path I was walking on. I should much like to have seen more of the chase than the short view I got of it. The rooks were flying very fast and surrounding the owl.—*Alwin S. Bell; Weymouth, September* 7, 1870.

Buffcoloured Redwing.—Mr. Gatcombe records a buffcoloured redwing killed near Plymouth (Zool. S. S. 2139). I possess a similar variety, but having the buff colour pencilled with light gray markings, and, as in the Plymouth specimen, the red patch on the side of a paler shade. I shot it and two or three other redwings out of a small flock in the "Plantation" at Scarborough some fifteen years ago. Since then, with the exception of Mr. Gatcombe's bird, I have not heard of or seen any similar variety of this species. In the same case with the redwing is a fieldfare, the general plumage mottled with white, taken on Filey sands in the winter of 1866.—*Id.*

Black Redstart near Southampton.—On the 27th of August a gentleman of Southampton shot a black redstart in this vicinity, and on the 29th another; a third was seen at the same time, but he could not obtain it. The first bird was spoiled by the shot, but the second has been preserved, and is now in the possession of the captor.—*T. H. Goatley; 4, Strand, Southampton, September* 17, 1870.

Grayheaded Wagtail breeding near Gateshead.—I have seen a good many notices in the 'Zoologist' of the occurrence of the grayheaded wagtail: it may interest you to hear of its breeding in this neighbourhood. Two nests were found by a friend of mine last year on some swampy ground near here; this year, on the 13th of June, I found another; and on the 8th of July my friend shot two young birds beginning to assume their mature plumage: one of these birds is in the possession of, and was identified by, Mr. Hancock, of Newcastle.—*J. Watson; Gateshead, September* 15, 1870.

Rose-coloured Pastor near Brighton.—On Saturday last, August 20, a farmer near Brighton observed two pretty birds which, in company with some starlings, perched every now and then on the backs of his sheep. Having fetched a gun he shot both—not, however, without touching up one of his flock. These birds proved to be Pastor roseus, the rosecoloured pastor, one of which I saw in the hands of Mr. Swaysland, the naturalist, on Monday.—*From the 'Field.'*

Cream-coloured Magpie.—A friend has lately told me of a cream-coloured magpie he saw near Manchester.—*E. D. Hamel; Bole Hall, Tamworth, September* 20, 1870.

Three Cuckoo's Eggs laid consecutively in the same Nest.—Three cuckoo's eggs were taken this season, at three distinct times, from the same straw-stack and the same nest: I should think that the same water wagtails laid three distinct times, and perhaps the same cuckoo. All three eggs are in my possession, and are all alike; the last was laid as late as the 1st of July.—*E. Charles Moor.*

Great Spotted Cuckoo.—I have the honour to forward you the announcement of a very rare bird (the great crested or spotted cuckoo) which was shot in Northumberland some weeks since. As it is the first specimen ever shot in Great Britain, the notice will be interesting to naturalist readers.—*Ernest Charlton, in the 'Field' newspaper.*

[At page 205 of the second volume of his 'British Birds,' Mr. Yarrell gives an excellent figure and some very interesting particulars of the occurrence at Clifden, on the west coast of Ireland, of the specimen from which the figure was taken. To these details Mr. Yarrell appends the following additional information:—"Another specimen, taken at Llawrenny is now in the collection of R. J. Auckland, Esq., of Boulston, near Haverfordwest.—Zool. 1851, p. 3046." On referring, however, to p. 3046 of the 'Zoologist,' the only cuckoo I find mentioned in addition to the common species is the yellowbilled American cuckoo (*Coccyzus americanus*), a specimen of which was killed at Stackpole Court by a Mr. Tracy, as communicated to the 'Zoologist' by Lord Emlyn at the very page cited by Mr. Yarrell. It seems to have been a *lapsus calami* on the part of that truly illustrious naturalist referring to the 'Zoologist' in this place, as the reference occurs also, and correctly, at p. 215 of the same volume under "Coccyzus americanus."—*Edward Newman.*]

Sand Martin Nesting in a Tree.—The fact of a sand martin (*Hirundo riparia*) choosing the above site for its nest is sufficiently unusual to deserve recording, even if it has not been altogether unnoticed by ornithologists. Over a tributary of the main river, near the village of Godstow, in Oxfordshire, is a little old stone bridge, and not only have the sand martins bored several holes in the crumbling mortar between the stones, and there nested, but this year on June 17 I found a nest containing five eggs, about a foot down a hole in the gnarled stem of an elm tree, which itself grows out from between the masonry and overhangs the river. The old bird was on the nest when I first went to it, and returned again directly I left the immediate vicinity.—*C. Bygrave Wharton; Willesden Lane, Middlesex.*

Alpine Swift at Aldeburgh.—The wind has been blowing very severely from the westward and southward during the week past. On Thursday, the 8th of September, an alpine swift was captured in a room at Brudenhall Hotel, under very singular circumstances. The bird had repeatedly "rapped" at the window for admittance, and at last the occupant of the room, who had been busy cleaning his gun, opened it and admitted the "illustrious stranger," which proved to be a very perfect specimen. It was in company with another, who did not, however, quite see the joke of being "taken in" like his companion, and speedily "put off."—*N. Fenwick Hele, in the 'Field' of September 17th.*

Pigeon Races in Belgium.—The race recently flown from Bazas has been followed by a second grand *concours* from Bordeaux to Brussels. This was flown on Saturday, the 23rd of July, when 1226 pigeons were liberated at five in the morning, the wind being north-east. The winner of the first prize reached home at a quarter to one on Sunday, the distance being 734 kilometres, or about 465 miles. On the same day a *concours* of 860 birds was flown from Bagnères de Bigorre to Liège. The first prize of 1300f. in value being given by the King of the Belgians, and the second of 1000f., third of 900f., &c., by the Society. The prizes awarded to the winning birds in this race amounted to nearly £700.—*From the 'Field.'*

Solitary Snipe and Quail in Denbighshire.—On the 8th of this month my father killed, near here, a fine specimen of the solitary snipe: it has been sent to Shrewsbury for preservation. On the 14th, while out partridge shooting, my father shot two brace and a half of quail in the same neighbourhood: it has also been ascertained that there were in the same locality two nests besides, this summer, but unfortunately the eggs were destroyed.—*W. J. Kerr; Maesmor, Denbighshire, September* 18, 1870.

Woodcock and Godwit.—With reference to the godwits and woodcocks, the serrated claw in Limosa melanura has long been known, but that it is not constant is proved by a specimen in my possession, which has the claw of the middle toe not in the least serrated. Ornithologists have long ago decided that the markings on the outer edge of the first quill in the woodcock are no criterion of sex: I have dissected several, and it does not hold good. Yarrell remarks of them, that they are rather indications of youth than of sex, the marks getting "obliterated by degrees." ('British Birds,' ii. p. 595.—*J. H. Gurney, jun.*

British Sandpipers at Scilly.—The elegant form of our sandpipers (*Totani*) renders them always agreeable visitors, whether on the margin of water or on the wing. There is a shyness and wildness in their nature which add to their interest with sportsmen. The common sandpiper, green sandpiper, redshank sandpiper and dusky sandpiper (the spotted redshank of Bewick and Gould) have all appeared, in their southern or autumnal migration, at the Scilly Isles during the last fortnight. I believe there is little or no seasonal change of plumage in the common, green or wood sandpipers of a remarkable character, but in the redshank and dusky sandpipers the change of plumage is striking, especially in the dusky sandpiper, which in summer becomes almost sooty black, from pale cinereous in winter. The dusky sandpiper in its first year previous to the autumnal moult shows a plumage well represented by Bewick in his figure of the *spotted redshank*, with the spots perhaps a little less defined: when they moult, which they do at this period, this state of plumage gives way to an uniform cinereous brown on the back, with the under parts almost white, instead of being marbled over brocoli-brown. I mention this to induce further observations from those who may obtain specimens at this time; for in a fine example of a bird just sent from Scilly, I observe the moult has commenced, and a few cinereous gray feathers are cropping out on the spotted back, showing the assumption of the winter plumage. I have not yet heard of any wood sandpipers at Scilly. It may be worth noticing that the spots in the plumage of young wood sandpipers are strongly tinged with yellow.—*Edward Hearle Rodd*; *September* 5, 1970.

Buffbreasted Sandpiper at Scilly.—A fine male specimen of this beautiful stint was shot on the margin of a pool at St. Bryher's, one of the inhabited islands at Scilly, last week, and is now set up by Mr. Vingoe with expanded wings, showing the elegant markings and powdered specks peculiar to this species. This, with two additional pectoral sandpipers, also from St. Mary's, Scilly, one of which, the male, is so superior in size to the other that it seems that I am supported in the opinion that in this, as well as the buffbreasted stint, the male is the largest.—*Id.*

Pectoral Stint or Sandpiper at Scilly.—Since I wrote to you with a few notes on the visits of the sandpipers to the Scilly Isles this autumn, furnished by my friend Mr. Jenkinson, who returned from the islands yesterday, I am enabled to add the occurrence, for the second time, of the pectoral sandpiper, which he shot just before he left the islands, and which he brought with him for my inspection. It is in very fine plumage, but presenting no feature of difference from the one obtained from the same locality by the late Mr. D. Mitchell, and referred to by Yarrell, in his article on the pectoral sandpiper in his 'British Birds.' Perhaps the breast presents a rather greater tendency to summer plumage, from the prominence of the dark markings: the feet and legs were brownish yellow.—*Id.*; *September* 8, 1870.

Pectoral Sandpiper at Scilly.—I merely wish to add to my former communication that another specimen, and apparently one amongst a flock, has been captured at Scilly. I suppose therefore that this species may be regarded as having hitherto escaped observation, and that vigilant eyes may find the species more generally spread about as one of our autumnal visitors than was anticipated. The legs may be described as greenish yellow: this is a good mark of distinction from the dunlin at all times.—*Id.*; *September* 12, 1870.

PS.—As a supplement to my former letters on the occurrence of the pectoral stint or sandpiper at Scilly, I write to inform you that a fine male specimen was kindly sent to me as a present by my friend Mr. Augustus Pechell, whose name has frequently appeared in the 'Zoologist' as having contributed rare British birds to the Cornish Avifauna. This specimen appears larger than the others I have seen, and it is a character at variance with the Tringæ generally, as the females (especially in the dunlin and when old) are much the largest.—*E. H. R.*; *September* 16, 1870.

Spurwinged Goose.—Mr. Rodd is mistaken in supposing that the St. Germans' spurwinged goose (which was not visible at Newcastle when I last made inquiries for it) is "the only recorded British specimen." One was killed near Banff in 1855 ('Naturalist,' 1855, p. 181), and is stated in the third edition of Yarrell's 'British Birds' to be in the possession of Mr. Smurthwaite, of Richmond, Yorkshire; but on a recent visit to that place with my father we could hear nothing of it, and I am unable to say whether it is referable to the true Anser gambensis or to Plectropterus rueppelli of Sclater ('Ibis,' iii. p. 375). In Kennedy's 'Birds of Berks and Bucks' there is a full account of another spurwinged goose which was shot near Boveney Weir by a waterman (p. 201), and another is recorded in 'Science Gossip,' for March, 1870, to have been captured in Wilts: the Rev. F. O. Morris also wrote to the 'Times,' last

November, that a young one had been got upon Salisbury Plain. Such records might be multiplied, but it is questionable if many of them do not refer to escaped birds. I take this opportunity of asking if the pinkfooted goose is not found in Cornwall, as it is not included in Mr. Rodd's list. In most places it is commoner than the bean goose, which he states to be "our common wild goose" (Zool. S. S. 2276).—*J. H. Gurney, jun.*

Dabchicks in Kensington Gardens.—There were twenty-five dabchicks on the round pond at Kensington yesterday: most of them had commenced shedding the adult summer plumage. Mr. T. D. Pigott informs me that he has seen as many as ninety-eight; a circumstance which seems worth putting on record.—*Id.; August* 23, 1870.

Terns at Henley-on-Thames.—Whilst walking by the river last Sunday I saw a tern of the common species flying about close to the bridge: it was evidently much tired, for it flew very weakly. We frequently see both terns and gulls on our reach.—*Charles E. Stubbs; Henley-on-Thames, Oxon, September* 13, 1870.

Where do our Summer Visitants go?—I have often thought that we need some reliable information concerning the doings of our summer visitants during the time they are absent from us. Can any of the readers of the 'Zoologist' enlighten us on this point? I believe it is pretty well known where many of them are to be found during our winter months; but I have never read from any reliable source in what way they pass their time, and if they are noticed to leave their winter quarters for our shores. Do they propagate while they are away? Are they in song—for instance, the nightingale, swallow, &c.? Some very interesting letters might be written on this subject, if any of your readers would direct their attention to the matter.—*Edward Sweetapple; Eynsham Paper Works, near Oxford, September* 12, 1870.

Spinous Shark taken off Penzance.—A spinous shark was taken here yesterday on a hook and line, about a mile off shore, on as nearly as possible the ground on which a spinous shark, of which I advised you at length (see Zool. Feb. 1866), was taken in December, 1865. This specimen was eight feet long and three feet in girth. It corresponds very closely with Couch's figure, and still more closely with Yarrell's second figure (first Supplement, p. 56). It was of a dark lead-colour. The eye slightly oval, but more round than is usual in sharks. The fish was bulkier in proportion to its length than my former specimen, and the spines were scarcer, stouter and shorter; they were also more regularly set, and being recurved backwards were less so than in the other. These and the superior bulk of this fish in proportion to its length constitute the only points of difference between the two specimens. In all particulars of dentition, gills, spiracles, and size and position of fins, the specimens correspond, and I therefore consider them of the same species, and attribute these differences to age or sex. Both these specimens have two anal fins on the same plane (just as the pectorals are): Yarrell and Couch show only one; they, especially the latter, figure the pectorals badly. The eye had a very small range upwards, but a very extensive scope downwards and forwards. The fish was taken on a bream-hook, and secured in good condition.—*Thomas Cornish; Penzance, September* 8, 1870.

Sting Ray near Penzance.—A specimen of the sting ray, or fire-flaire, was taken in Porthcurnow Sands, about nine miles west of this place, on Wednesday, August

24th. It is the first specimen I have ever seen in this bay. There is nothing requiring remark about it in addition to the notes of Couch and Yarrell, except that in the front of the mouth were spiracles divided from each other by a cartilage, and each divided in itself by a free lobe, both being covered by a square flap of fleshy substance, which was extended so as to cover the front part of the mouth. I never saw any arrangement like this in any other ray.—*Thomas Cornish; Penzance, August* 26, 1870.

Small-eyed Rays in Mount's Bay.—On Tuesday, the 30th of August last, I took four small-eyed rays (*R. microcellata*); but as I can almost certainly depend on taking some of these fish on the ground where I took them (Pra Sand, Mount's Bay), I merely note the fact for reference.—*Id.*

Thrasher in the West Bay, Portland.—A thrasher, measuring ten feet three inches in length and three feet three inches and a half in circumference, was taken in a seine in the West Bay at Portland yesterday afternoon, and is now being shown in a tent on the sands here. About four thousand pilchards were taken in the same haul, a number of others escaping over the top of the net in the commotion caused by the shark.—*Alwin S. Bell; Weymouth, September* 14, 1870.

Cray-Fish.—I am anxious to obtain the geographical distribution of the river cray-fish (*Astacus fluviatilis*). In compiling that part of my 'Catalogue Fauna of Devon' relating to the stalk-eyed Crustacea, including an introductory essay on the histology of their shells, which I read last week before the Devon Association for the Advancement of Literature, Science, and Art, held at Devonport, I was greatly astonished to find that the cray-fish is not a native of Devon. I have made inquiries in every direction where I thought to obtain information of this species, but have so far not been able to procure or hear of an authentic Devon specimen. It is stated by Dr. Moore, in Loudon's 'Magazine of Natural History,' that there was when he wrote a Devon specimen in the museum at Plymouth, from Mr. Prideaux, but no locality was attached to it; and this is the only one I have heard of in the county. I have had them from the Tane, near Taunton; and I have had them from near Salisbury, where they are plentiful. I wrote my friend Mr. Pulman, the author of 'The Book of the Axe,' thinking that the cray-fish, if to be found in the county at all, would be met with in this river, or some of its tributaries; but he tells me it is not found there, but that he has found them in numbers in the streams in meadows at Maiden Newton, near Dorchester. Now, if we draw a line from this place, or say from Portland, it will cut these streams at Maiden Newton, Taunton, and end in Watchet Bay, giving an angle of about forty-five degrees west; this appears to be the line of demarcation of this species westward. I have heard it stated—and, indeed, it was mentioned in the discussion on my paper—that the river cray-fish is never found except in rivers flowing to the east; and it was also stated that they were as frequently found in rivers flowing to the west, but the country people generally believe in the former. Whether this be a legend of the west, I am not prepared to say, or whether it pertains to other parts of England; perhaps some of your correspondents will be good enough to say.—*Edward Parfitt.—From the 'Field.'*

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